

MIPOS 20

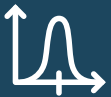
Lens Positioning System



20 μm Focusing Range



**Typ. Step Resolution 1 nm
in closed-loop**



**Resonant Frequency up to
950 Hz**



High Stiffness 4 N/ μm



The piezoelectric objective lens positioning system MIPOS series was developed for finely adjusting microscope objectives / lenses. The maximum motion for the MIPOS 20 is 20 μm . The resolution in practice is only limited by the voltage noise of the power supply.

All standard threads for Zeiss, Leica, Olympus, Nikon, Mitutoyo etc. are available for the top and bottom sides of the MIPOS series.

Mounting this system onto a microscope is very easy. Screw the Flex-Adapter thread ring into the microscope and mount the MIPOS on this ring with a clamping screw. Because of the small size, the MIPOS positioner does not interfere with any other objectives on the microscope turret.

To avoid drift and hysteresis, MIPOS series objective positioners can be equipped with an integrated strain gauge measurement system "SG"

Variants:

- Standard
- With strain gauge (SG)

Recommended Controller:

NV200/D Net

Applications

- Surface scanning and analysis
- AFM microscopy
- Biotechnology (e.g. cell scanning)
- Beam focusing for printing processes
- Semiconductor test equipment

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Technical Data

		Unit	MIPOS 20	MIPOS 20 SG
Part # for thread	M25x0.75	-	O-383-00	O-383-01
	W0.8x1/36" (RMS)	-	O-384-00	O-384-01
	M26x0.75	-	O-385-00	O-385-01
	M27x0.75	-	O-386-00	O-386-01
Axis		-	Z	
Motion in open-loop (±10%)*		µm	20	
Motion in closed-loop (±0,2%)*		µm	-	16
Capacitance (±20%)**		µF	0.7	
Integrated Measurement System		-	-	SG
Resolution open-loop***		nm	0.04	
Resolution closed-loop***			-	1
Typ. Repeatability		nm	-	5
Resonant Frequency	unloaded		950	
	additional load = 80g	Hz	520	
	additional load = 105g		450	
	additional load = 300g		240	
Stiffness		N/µm	4.0	
Rotational Error (full motion)		µrad	<5	
Voltage		V	-20...+130	
Connector ****	Voltage		LEMO 05.302	
	Sensor	-	-	LEMO 05.304
Cable Length		m	1.0	1.2
Dimensions (LxWxH)		mm	54 x 32 x 32.5	
Mass		g	95	115
Max. Lens Diameter		mm	30	
Max. Lens Weight		g	300	
Option for Standard Microscopes			yes	
Option for Inverse Microscopes			no	

* Typical value measured with 0.3 mV noise controller.

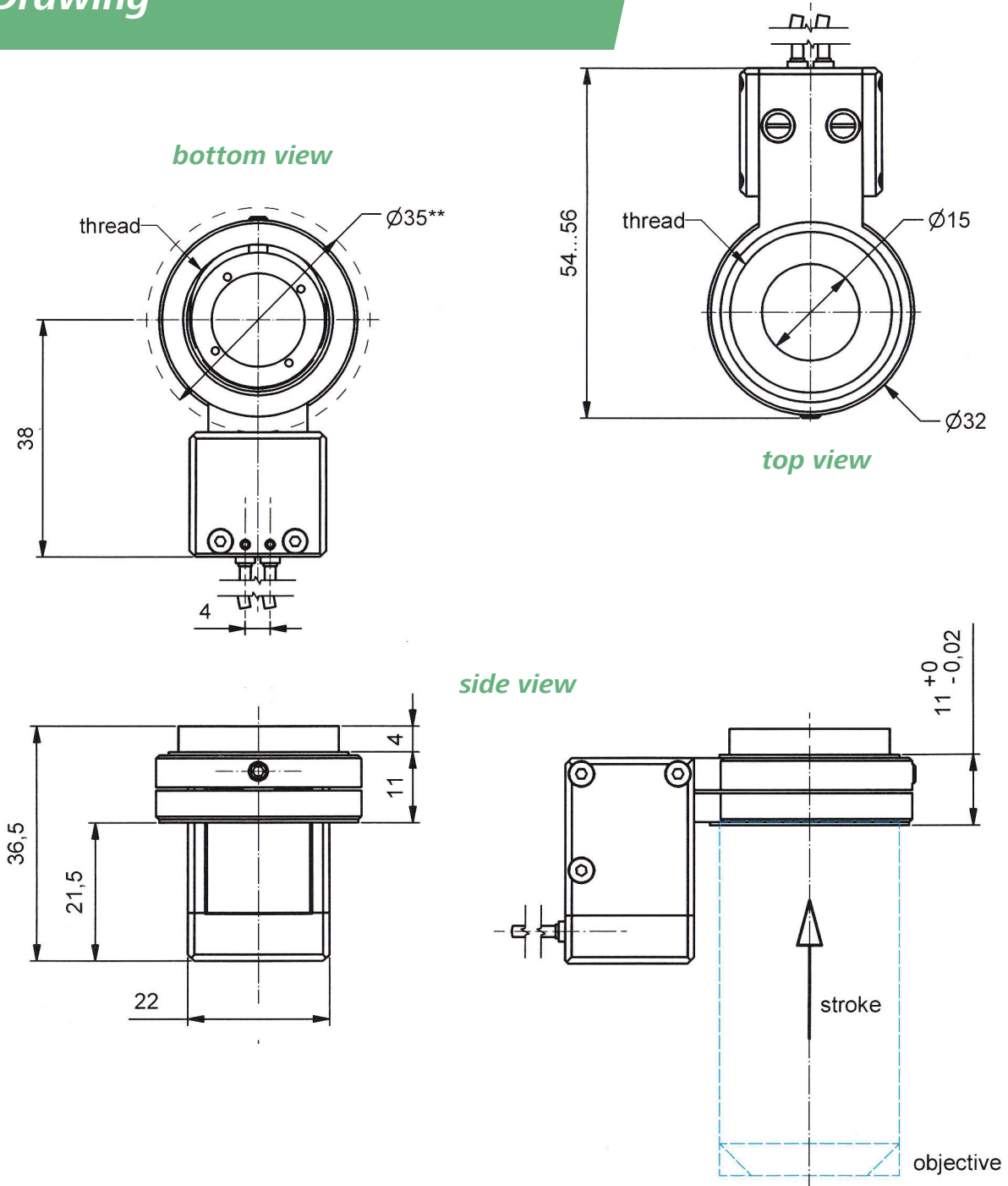
** Typical value for a small electrical field strength.

*** The resolution is only limited by the noise of the controller.

**** In combination with a digital controller unit, the system comes with a sub-D 15 connector. The part number is extended by the suffix "D"

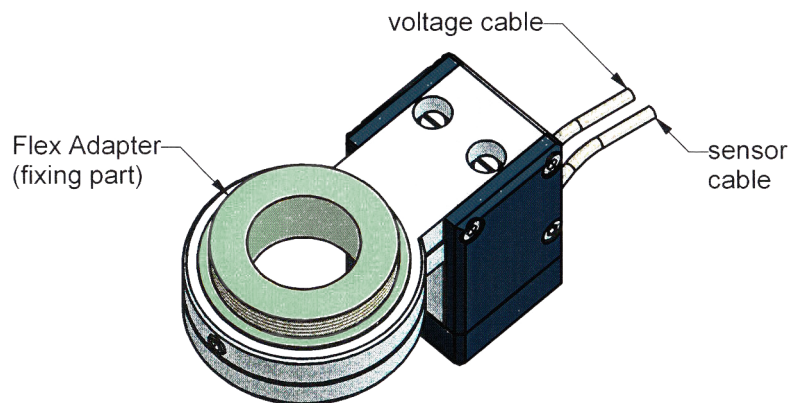
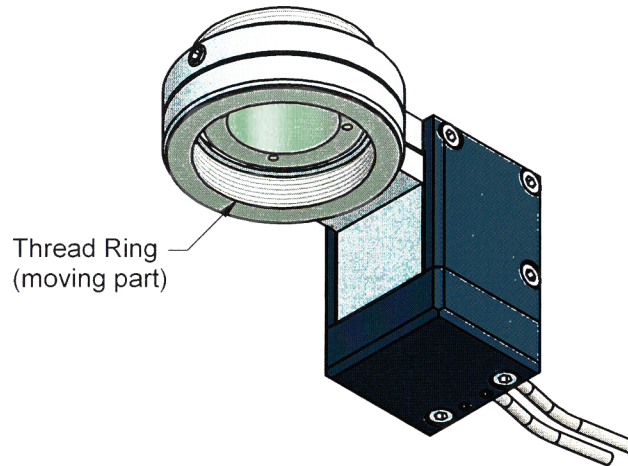
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Part Drawing



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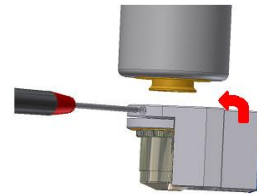
Part Drawing



1. Screw the objective into the MIPOS



2. Screw the Flex-Adapter into the microscope



3. Clamp the MIPOS on the Flex-Adapter using the attachment

Rights reserved to change specifications as progress occurs without notice.

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